



CITY OF LODI

COUNCIL COMMUNICATION

AGENDA TITLE: Mokelumne River Conjunctive Use Joint Project Study Agreement between San Joaquin Parties and East Bay Municipal Utility District

MEETING DATE: August 16, 1995

PREPARED BY: Public Works Director

RECOMMENDED ACTION: That the City Council authorize the City Manager to execute the attached agreement.

BACKGROUND INFORMATION: At the City Council meeting of June 7, 1995, staff presented, for information only, a recap of the East San Joaquin Parties/East Bay Municipal Utility District Joint Conjunctive Use Project. A copy of this Council Communication is attached. This agreement covers the initial preliminary study phase. As indicated in the Council Communication, each participating agency is being asked to execute the agreement even though the funding for the San Joaquin County agencies is being made through the County's Water Zone Investigation II fund account.

FUNDING: San Joaquin County funds

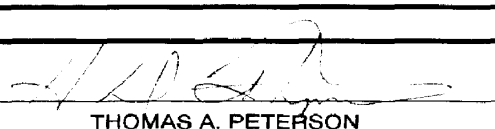

Jack L. Ronsko
Public Works Director

JLR/lm

Attachments

cc: WID, Attn: Andy Christensen, Manager
Water/Wastewater Superintendent

APPROVED: _____


THOMAS A. PETERSON
City Manager



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JOINT PROJECT STUDY AGREEMENT

San Joaquin Conjunctive Use Project
East San Joaquin Parties (ESJP)
and East Bay Municipal Utility District

MAY 2 1995

THIS AGREEMENT is made and entered into this ____ day of ____, 1995, by and between East Bay Municipal Utility District, a public corporation, hereinafter called "DISTRICT," and the Eastern San Joaquin Parties, consisting of Woodbridge Irrigation District, North San Joaquin Water Conservation District, Central San Joaquin Water Conservation District, Stockton East Water District, City of Lodi, City of Stockton, San Joaquin County, and the San Joaquin County Flood Control and Water Conservation District, hereinafter collectively referred to as "ESJP".

WITNESSETH

WHEREAS DISTRICT's Board of Directors adopted a Water Supply Management Action Plan on January 24, 1995, that includes evaluation of conjunctive use project alternatives with ESJP that incorporate the Mokelumne River and the District's American River entitlement into a San Joaquin County based conjunctive use program; and

WHEREAS ESJP and DISTRICT desires to develop alternatives for a joint project (said development of alternatives being referred to herein for purposes of this agreement as "Project") to meet the present and future water needs of ESJP while meeting DISTRICT's future dry year water needs; and

WHEREAS DISTRICT and ESJP require professional services to assist with the formulation of Project alternatives, said services to be provided by MONTGOMERY WATSON AMERICA (hereinafter called "MWA") BOYLE ENGINEERING (hereinafter called "BOYLE"), and a GEOTECHNICAL firm (hereinafter called "GEOTECHNICAL"); and

WHEREAS DISTRICT and ESJP intend to share the costs of professional services for this Project on an equal basis;

NOW, THEREFORE, IT IS MUTUALLY AGREED by ESJP and DISTRICT as follows:

1. MWA Contract: DISTRICT will enter into a contract with MWA to develop Project alternatives for an amount not-to-exceed \$549,907. Said MWA services are described in the Scope of Work attached hereto as Exhibit A and incorporated herein. MWA will provide copies of all reports, correspondence, invoices and work products for this Project to ESJP unless otherwise specified by ESJP. Payment by DISTRICT to MWA for said services will contribute to DISTRICT's Share of Total Costs as defined herein. DISTRICT shall provide copies of all invoices received from MWA for this Project to ESJP.

2. BOYLE Contract: ESJP will enter into a contract with BOYLE to provide technical services for this Project for an amount not to exceed \$50,000. BOYLE shall have access to information being developed for each engineering task's development to the satisfaction of the ESJP's Technical Team. Said services are described in the Scope of Work attached hereto as Exhibit B and incorporated herein. Payment by ESJP to BOYLE for said services will contribute to ESJP's Share of Total Costs as defined herein. ESJP shall provide copies of all invoices received from BOYLE for this Project to DISTRICT.
3. GEOTECHNICAL Contract: ESJP will enter into a contract with GEOTECHNICAL for soil exploration to evaluate percolation along the extension of the Folsom South Canal alignment, for an amount not to exceed \$30,000. Payment by ESJP to GEOTECHNICAL for said services will contribute to ESJP's Share of Total Costs as defined herein. ESJP shall provide copies of all invoices received from GEOTECHNICAL for this Project to DISTRICT.
4. Total Costs: Total Costs for MWA, BOYLE, and GEOTECHNICAL shall not exceed \$629,907 and shall be borne equally as follows:

<u>Not-to-exceed Limits</u>	<u>District</u>	<u>ESJP</u>
\$549,907 MWA services'	\$274,954	\$274,954
\$ 50,000 BOYLE services	\$ 25,000	\$ 25,000
<u>\$ 30,000 GEOTECHNICAL services</u>	<u>\$ 15,000</u>	<u>\$ 15,000</u>
\$629,907 Maximum Total Costs	\$314,954	\$314,954

5. Cost to DISTRICT: DISTRICT's Share of Total Costs shall be 50% of the sum of costs payable to MWA, BOYLE, and GEOTECHNICAL for this Project up to a maximum of \$314,954. DISTRICT will satisfy its responsibility for costs through payments to MWA for services specified in Exhibit A of this Agreement. DISTRICT and ESJP recognize that costs for MWA are expected to exceed costs for BOYLE and GEOTECHNICAL. If the sum of DISTRICT payments to MWA exceed DISTRICT's Share of Total Costs, DISTRICT will be entitled to reimbursement from ESJP as defined herein.
6. Cost to ESJP: ESJP's Share of Total Costs shall be 50% of the sum of costs payable to MWA, BOYLE, and GEOTECHNICAL for this Project up to a maximum of \$314,954. The San Joaquin County Flood Control and Water Conservation District shall be billed for and shall pay the share of the ESJP. ESJP through the San Joaquin County Flood Control and Water Conservation District will satisfy their responsibility for

Joint Project Agreement
ESJP and East Bay Municipal Utility District
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costs through payments to BOYLE and GEOTECHNICAL for services specified in this Agreement, and through reimbursement to DISTRICT as needed to equalize ESJP's and DISTRICT's Total Costs.

7. Reimbursement: If reimbursement is needed to equalize Total Costs for ESJP and DISTRICT, such reimbursement shall commence on a mutually acceptable schedule, however, in no event shall such schedule extend beyond 36 months from the effective date of this Agreement, unless agreed to in writing by ESJP and DISTRICT. If such reimbursement has not been completed within 18 months of the effective date of this Agreement, interest shall then accrue on the unpaid balance at that time at the rate of eight percent per annum.
8. Other Terms: This Agreement shall be effective upon execution by DISTRICT and Board of Supervisors, San Joaquin County and the San Joaquin County Flood Control and Water Conservation District and shall continue through the completion of Project studies and the reimbursement period. This Agreement constitutes the entire understanding of ESJP and DISTRICT with respect to cost sharing for this Project. All amendments to this Agreement shall be in writing and shall be effective upon execution by DISTRICT and Board of Supervisors, San Joaquin County and the San Joaquin County Flood Control and Water Conservation District.

IN WITNESS WHEREOF the parties hereto execute this AGREEMENT in duplicate.

EAST BAY MUNICIPAL UTILITY DISTRICT

Date: _____

By: _____

Jorge Carrasco
GENERAL MANAGER

SIGNATURES CONTINUED ON NEXT PAGE

EAST SAN JOAQUIN PARTIES

MAY 2 1995

Date: _____

(Attest: _____)

By: GEORGE L. BARBER
George L. Barber
CHAIRMAN
Board of Supervisors
County of San Joaquin
and the
Board of Supervisors of the
San Joaquin County Flood
Control and Water
Conservation District

Date: _____

(Attest: _____)

By: _____

Woodbridge Irrigation District

Date: _____

(Attest: _____)

By: _____

Board of Directors
North San Joaquin Water
Conservation District

Date: _____

(Attest: _____)

By: _____

City of Lodi

Date: _____

(Attest: _____)

By: _____

Board of Directors
Stockton East Water District

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ESCP and East Bay Municipal Utility District
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EAST SAN JOAQUIN PARTIES (cont'd)

Date: _____

By: _____

(Attest: _____)

City of Stockton

Date: _____

By: _____

(Attest: _____)

Board of Directors
Central San Joaquin Water
Conservation District

ITEM 2 - EBMUD WATER SUPPLY ACTION PLAN

SCOPE OF WORK

The project objective is to meet the present and future water needs of the Eastern San Joaquin Parties (ESJP) while meeting EBMUD's future dry year water needs. The objective of this scope of work is to identify a short list of one or more alternative plans that would achieve the project objectives. Data, tools and analytical results developed in Phase 1 of the Mokelumne Aquifer Recharge and Storage Project (MARS) will be used to the extent possible and practicable in this work to minimize costs and provide consistency of analyses and results between the two efforts. In particular, the San Joaquin County IGSM and the GIS originally developed for Phase 1 MARS will serve as the basic analytical tools for this work.

STAGE I - DEVELOP PROJECT BASIS

Activities completed in this stage are intended to provide the fundamental knowledge and understanding required to support subsequent formulation of coherent alternative plans that would achieve the project objectives.

Task A Evaluate Water Needs and Potential Water Sources

1. Using the San Joaquin County IGSM, evaluate the following:
 - Total yearly quantity of water required to stop saline intrusion and initiate basin storage recovery,
 - Minimum groundwater elevation(s) required to have no further saline intrusion (threshold elevation),
 - Annual average volume of water required to achieve threshold elevation in 5 years, 10 years
 - Annual average quantity of water required to meet joint project goals with groundwater elevations always above threshold elevation,
 - Dry year water supply if 300,000 af/yr is available in wet years, dry year water supply if 400,000 af/yr is available in wet years.

Describe the basis and evaluate the following potential water sources:

2. EBMUD American River water service contract delivered from the Folsom South Canal (FSC), as conditioned by the Hodge Decision.
3. Mokelumne River water unused within EBMUD entitlements, assuming EBMUD's settlement offer to FERC defines instream flow requirements.
4. Stanislaus River water associated with USBR water service contracts with Central San Joaquin Water Conservation District (49,000 acre-feet firm) and Stockton East Water District (106,000 acre-feet interim), assuming USBR operates New Melones to meet D1422.
5. Existing ESJP entitlements, including those for water from the Mokelumne and Calaveras Rivers.

6. San Joaquin County American River permit application 29657, alternative B, diversion at Nimbus Dam.
7. Potential diversion of currently unregulated flows from the Mokelumne, American, Calaveras, and Stanislaus Rivers, and the streams flowing into Farmington Reservoir, assuming EBMUD offer to FERC instream flows for the Mokelumne, and D1422 compliance for the Stanislaus.
8. Reclaimed wastewater from Lodi and Stockton, other than Section 1485.
9. Diversions from the Sacramento River/Delta.
10. Possible assignment or transfer of state filings or reserved water rights on the Mokelumne, assuming instream flows as specified in EBMUD's July 16, 1993 offer of settlement to FERC.

For each potential source, describe existing water right conditions, prepare baseline monthly water availability hydrographs, and identify relevant reliability and implementability issues associated with water right priority, related regional water management initiatives, and apparent statutory and institutional constraints. All analyses will assume no change in Oakdale I.D. and South San Joaquin I.D. service area or consumptive use.

Deliverable: Task report presenting the results of this task.

Task B Establish Design Criteria

Supplement Task Report 2.1, prepared under the original contract, as required to serve as the design criteria basis for subsequent facilities layout and cost estimating work. Supplemental criteria are expected to include right-of-way dimensions associated with large canals and large diameter pipe, tunnel design and cost criteria, and assumptions regarding facilities design capacities based on Task A results.

Deliverable: Revised Task Report 2.1

Task C Establish Evaluation Criteria

Prepare a brief memorandum describing the four general evaluation criteria developed under Task 2.1 of the original contract scope of services and their applicability to this work. Present this evaluation/screening approach to EBMUD and ESJP representatives, make necessary corrections, and finalize the criteria to be used subsequently.

Deliverable: Brief draft memorandum presenting criteria, finalized to reflect ESJP/EBMUD consensus.

Task D Lay Out Facilities

Through field investigation, establish an apparently viable alignment and location for each of the major facilities associated with each alternative and display each alignment and the location of key facilities on USGS 7.5 minute quad mapping and GIS mapping. Input the corridors to the project GIS and perform constraints analyses as merited to test the validity of each corridor (it is assumed that the coverage of the GIS will be expanded by others to cover the required project area). Verify the resulting siting in the field. Conduct a group

tour of the alignments, facility locations, and points of interest to elicit local comment and confirm routing and siting assumptions. Size each facility and develop hydraulic profiles for each facility.

1. Unlined flat canal from terminus of FSC to Peters along the original FSC alignment, sized to:

- deliver water for direct and in-lieu recharge to irrigators,
- convey available streamflows for groundwater recharge by means of canal seepage, and
- supply various potential and existing storage reservoirs.

Analyses and estimates will differentiate reaches from Dry Creek to Peters and Dry Creek to FSC terminus, to provide for consideration of phased construction.

2. Camanche diversion to Bear Creek as evaluated under Task 2.3 of the original contract scope of services.
3. Diversion facilities from Dry Creek, Mokelumne River, Calaveras River, and (typical) lesser water courses into the unlined flat canal.
4. Improvement and expansion of irrigation distribution systems and on-farm irrigation systems to reasonably maximize in-lieu recharge (switching groundwater pumps to surface water in wet years), direct recharge (infiltration or injection), and indirect recharge through increased irrigation efficiencies in:
 - a. Central San Joaquin Water Conservation District,
 - b. Stockton East Water District,
 - c. North San Joaquin Water Conservation District, and
 - d. Woodbridge Irrigation District (agricultural exchange not considered in WID).
5. Direct to aqueduct extraction well system as evaluated under Task 2.3 of the original contract scope of services.
6. Sacramento River diversion upstream of the Sacramento Regional Wastewater Treatment Plant discharge from the vicinity of Freeport to the unlined flat canal described above
7. Diversion from Beaver Slough to unlined flat canal.
8. Mokelumne Aqueduct delivery to portions of ESJP as evaluated under Task 2.3 of the original contract scope of services.
9. Pipeline from existing EBMUD turnout from the FSC to the Mokelumne Aqueducts to free up like volumes of Mokelumne River water for the ESJP/EBMUD conjunctive use project.
10. Pipeline from the terminus of the FSC to the Mokelumne Aqueduct to free up like volumes of Mokelumne River water for the ESJP/EBMUD conjunctive use project.
11. Means for diverting water from the flat, unlined canal described in (1) above, to the Mokelumne Aqueducts.

Deliverable: Layout of each facility with listing of key design assumptions and facility characteristics.

Task F Identify Environmental Effects

Based on field review of the alignment corridors identified in Task D, identify siting constraints based on environmental and regulatory considerations. Identify and evaluate issues associated with siting new diversion facilities on the Sacramento River upstream of the Sacramento Regional Wastewater Treatment Plant discharge, and at Beaver Slough. Review issues associated with impacts on instream flows in the Lower American River.

Deliverable: Task report presenting the results of this task.

Task G Prepare Cost Estimates

Prepare reconnaissance-level estimates of capital and recurring costs associated with each of the facilities listed under Task D.

Deliverables: Task report presenting the results of this task.

STAGE II - ALTERNATIVES FORMULATION AND EVALUATION

Activities completed in this stage are intended to result in identification of a small number of the best viable alternative plans that would achieve the project objectives.

Task H Assemble Alternatives

Based on the results of Tasks 1 through 7, screen potential water sources and facilities defined under Task D against the four general evaluation criteria used for Task 2.1 of the original contract scope of services. Assemble the remaining sources and facilities; including conveyance, recharge, extraction, and storage facilities; into approximately three alternative plans for further analyses and evaluation. Agricultural exchange with Woodbridge Irrigation District not considered.

Deliverable: Task report presenting the results of this task.

Task I Evaluate Project Performance

Using the San Joaquin County IGSM developed under Task 1.6 of the original scope of services, evaluate quantity and quality impacts on groundwater and surface water resources resulting from operation of approximately three alternatives identified in Task H including consideration of generalized offstream storage options. Use PROSEM to evaluate impacts on CVP deliveries, SWP deliveries, and Delta outflows. Quantify benefits accruing to project participants and groundwater pumpers in the project area resulting from operation of each alternative.

Deliverable: Task report presenting the results of this task.

Task J Evaluate Implementation Issues

Identify and discuss institutional and regulatory issues associated with implementation of approximately three alternatives. Develop recommended strategies for configuring and/or implementing alternatives to enhance implementability.

Deliverable: Task report presenting the results of this task.

Task K Compare/Rank Alternatives

Compare and rank the alternatives on the bases of completeness, efficiency (including cost estimates), effectiveness and acceptability as defined under Task 2.1 of the original contract scope of services.

Deliverable: Task report presenting the results of this task.

Task L Develop Cost Sharing Strategies

Identify and develop various means for quantifying benefits and identifying cost share responsibilities for a joint program. Identify potential project participants' "ability to pay" for project water service. Apply each identified means to the alternatives assembled in Task H.

Deliverable: Task report presenting the results of this task.

Task M Prepare Draft Report

Prepare a draft report documenting the alternatives identification, evaluation and comparison work.

Deliverable: Draft report.

Task N Coordinate Project Activities

Coordinate and manage all project activities, arrange and conduct project meetings: prepare monthly invoices, progress reports, and schedule updates; and make presentations to the EBMUD Board and to the San Joaquin County Water Advisory Commission and/or its Technical Advisory Committee. Assume the following meetings:

- 10 biweekly meetings in Stockton
- 5 monthly TAC meetings in Stockton.

Assume the following presentations:

- two EBMUD Board workshops
- two ESJP Board-equivalent workshops.

Deliverables: Agenda and advance written materials for each formal meeting and presentation; minutes for each formal meeting; presentations.

Task O Prepare Final Report

Incorporate client comments into the draft report and finalize the document.

Deliverable: Final report.

San Joaquin Conjunctive Use Project

Scope of Work

The primary role of Boyle Engineering Corporation (Boyle) during the project investigation shall be as technical advisor to the East San Joaquin Parties (ESJP). The general tasks of Boyle consist of the following:

1. Provide engineering guidance and comments to data and other technical information that is to be developed by Montgomery Watson America (MWA) (i.e., alternative development schemes, agricultural distribution system, etc.).
2. Assist the ESJP Technical Committee in providing review comments to Task Reports and Draft Report prepared by MWA.
3. Participate in biweekly project and monthly TAC meetings.
4. Participate in ESJP Technical Committee and ESJP board meetings for the purpose of further defining the potential benefits and/or deficiencies in alternative project plans.



CITY OF LODI

COUNCIL COMMUNICATION

AGENDA TITLE: East San Joaquin Parties/East Bay Municipal Utility District
Joint Conjunctive Use Project (Information Only)

MEETING DATE: June 7, 1995

PREPARED BY: Public Works Director

RECOMMENDED ACTION: This material is being presented to the City Council for its information.

BACKGROUND INFORMATION: A committee, appointed by Supervisor Barber, has been working with East Bay Municipal Utility District (EBMUD) for approximately a year to develop the Water Banking/ Conjunctive Use Project. A copy of the Agreement initiating preliminary study is attached as Exhibit 1. The City of Lodi will be asked to sign this Agreement at a later date. All costs under this Agreement will be the responsibility of EBMUD and San Joaquin County. The major principles of the Project include:

- stop the overdraft of the East San Joaquin groundwater basin
- restore this groundwater basin to a reasonable level
- stop saline intrusion
- provide the water needs to the East San Joaquin Parties (ESJP)
- supply EBMUD with dry-year water

The ESJP include the following agencies:

- Woodbridge Irrigation District (WID)
- North San Joaquin Water Conservation District (NSJWCD)
- Central San Joaquin County Water Conservation District (CSJCWCD)
- Stockton East Water District (SEWD)
- City of Lodi
- City of Stockton
- San Joaquin County Flood Control and Water Conservation District

The ESJP Technical Committee, a subcommittee of the Water Policy Committee, is presently working with EBMUD engineers to develop a formal work plan. As part of the work plan, some of the major water sources to be considered are:

- wet-year Mokelumne River water supply
- existing entitlements of ESJP from the Mokelumne and Calaveras rivers
- EBMUD's American River supply

APPROVED: _____

THOMAS A. PETERSON
City Manager



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East San Joaquin Parties/East Bay Municipal Utility District Joint Conjunctive Use Project
(Information Only)
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- USBR/SEWD/CSJWCD contracts
- 1485 Water (treated wastewater from Stockton released to Delta)
- reclaimed wastewater from City of Lodi and City of Stockton


Some of the needed facilities include an unlined canal between Folsom Canal and Farmington Canal, and new irrigation distribution systems to serve surface water in lieu of groundwater. A plan showing the canal alignment is attached as Exhibit 2.

The total preliminary study project costs are approximately \$630,000. These costs are to be shared equally between EBMUD and San Joaquin County. The majority of the work will be performed by Montgomery Watson consulting engineers. The ESJP Technical Committee has also retained Boyle Engineering as its consultant to work with them. The total County's share is approximately \$315,000 and will be funded by the County using its Water Zone Investigation II funds. A time schedule for this work is attached as Exhibit 3.

Also attached for your information is a document entitled "Undercurrents Developed by EBMUD and ESJP" which provides more general information on this joint project.

Andy Christensen, from WID, is the Chairman of the ESJP Technical Committee. He will be at the Council Meeting to help answer any questions you may have related to this project.

FUNDING: San Joaquin County funds.



Jack L. Ronsko
Public Works Director

JLR/lm

Attachments

cc: WID, Attn: Andy Christensen, Manager
Water/Wastewater Superintendent